

OMS

PRECISION MECHANICS SINCE 1982



AEROSPACE SECTOR



English Version

Introduction

O.M.S. S.r.l. has been manufacturing high-precision mechanical commodities on commission for more than thirty years.

Since arriving on the market for the supply of parts for aerospace companies, it has over the years acquired an excellent production capacity diversifying into various product sectors, ranging from prototype to medium-large series production.

Currently, its main customers are AVIO SPA and CNR, the national research centre.

PRODUCTION SITE

Via Carpinetana sud km 6.200 – 00037 Segni (Rm)



The production site consists of an internal surface area of 1,400 square metres and a work area of 3,000 square metres

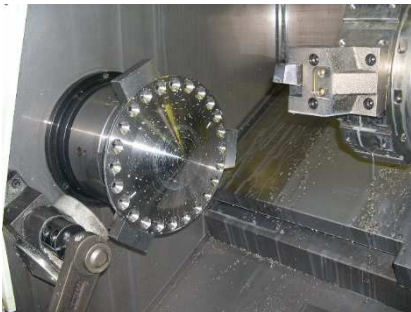
The operating unit consists of:

- 1 Plant manager
- 1 Turning department manager
- 1 Milling department manager
- 4 CNC machine handling technicians
- 10 CNC machine handling operators
- 1 RSQ
- 2 Testers
- 1 Head of logistics
- 4 assistants for secretarial and planning work

Services Provided

The company's production activity is made up of high-precision mechanical manufactured goods for supply and manufacturing purposes.

The workshop handles the following work:



- **Milling**
- **Turning**
- **Drilling**
- **Adjustment**
- **Fitting**
- **Toothing**

We also offer the option of fully managing the entire manufacturing process of a product from its design stage, starting from a project on paper, a piece or sample, up to the mechanical implementation of the various components of the part and the internal creation of a pre-series:

Our main processes and services are:

➤ ***Simultaneous engineering:***

- *Advice on product design*
- *Outsourcing service*
- *Reverse engineering*
- *Reengineering*
- *Development of pieces.*
- *Optimisation of materials.*
- *Projects.*

➤ ***Mechanical Processing***

- *Set-up of production cycles*
- *Creation of medium to large series*

Space Sector

We are qualified and register-approved suppliers to AVIO SPA for essential parts for use in the space industry. In detail, we produce flight parts for the **VEGA and ARIANE 5** launch vehicles

➤ **VEGA VEHICLE, OMS PRODUCTION FLIGHT PARTS:**

We produce all the jack brackets and MLI brackets in 7075 T7351 in different states, P80, Z23 and Z9 alloy. (Here are some examples of the components produced)



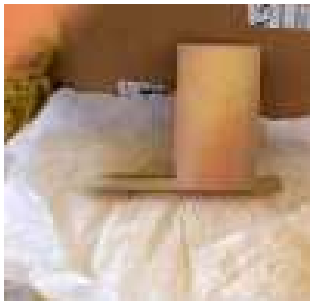
Al 7075 T7351
Z9/Z23



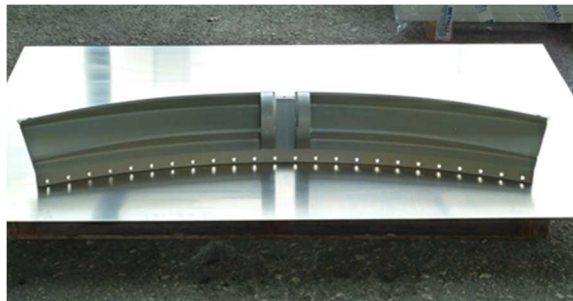
Al 7075 T7351
Z23



Al 7075 T7351
Z9



Al 7075 T7351
MLI



Al 7075 T7351 (size 1200x500x200)
P80



Al 7075 T7351
MLI

On the **AVUM** platform, we are the only supplier of Ti 6Al4V manifold, managing certification with Proof, Burst, non-destructive controls and RX tests in their entirety. (Here are some examples of the components produced)



Ti6Al4V



Ti6Al4V



Ti6Al4V

➤ **ARIANE 5 AND ARIANE FUTURE 6 VEHICLE, OMS PRODUCTION
FLIGHT PARTS:**

IGNITER

*Qualified to create metal parts for the Future Ariane 6 igniter.
(Here are some examples of the components produced)*



Material: Custom 450

We handle all the processes linked to these items, from raw material to specimens for mechanical characterisation, to Proof and Burst instrument tests with strain gauges and even non-destructive controls.



BURST TEST
840 bar

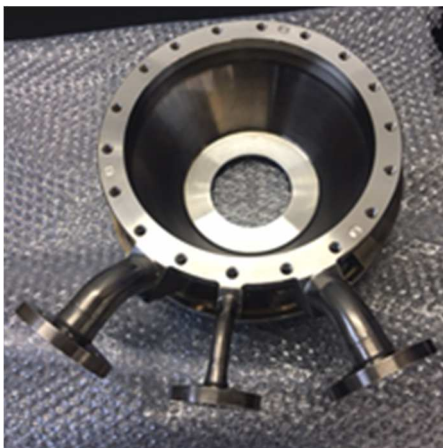
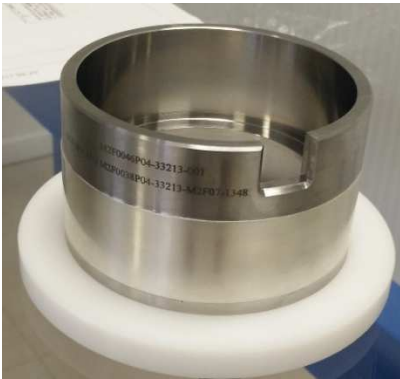


PROOF TEST
400 bar

VULCAIN II TURBO PUMP

Qualified for the creation of CF0 parts on the VULCAIN II turbo pump for the Ariane 5 / Future Ariane 6 programme.

(Below are some examples of essential parts made in INCONEL 718 AMS 5662)



VINCI TURBO PUMP

For **Ariane 6**, we are qualified as suppliers of CF1, CF2 and CF3 parts on the VINCI turbo pump.
(Here are some examples of the components produced)



Material: Inconel 718; Incoloy A286

➤ **IXV, Intermediate eXperimental Vehicle OMS:**

We are the manufacturers of thermal coating in ablative material of the European re-entry vehicle (IXV). (Here are some examples of the components produced)



Prototype Sector

*Regular collaboration with CNR INSEAN for naval experience on scale models.
Specialised in the production and testing of propellers.*



PRODUCT CERTIFICATION



The company has a constant temperature metrology lab and a workshop testing room.

The quality of our products is ensured by a scrupulous first-on-board machine control and then through systematic methods and procedures with the help of a three-dimensional measuring system.

All control equipment is subject to periodic calibration and certification by appointed bodies.

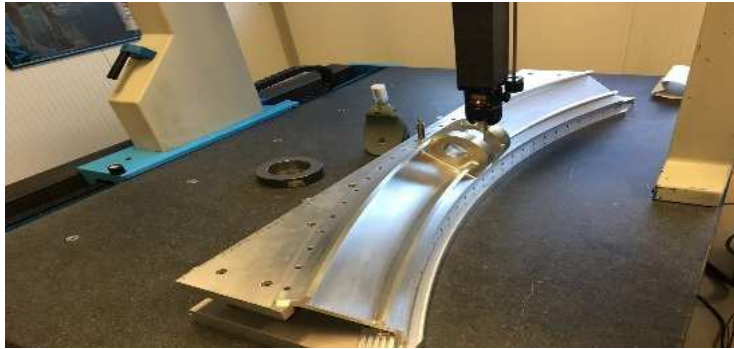
*The company has a quality certification system in accordance with the European directive **UNI EN ISO 9001: 2008** and is subject to a control inspection every year by the appointed body.*

Each product is carefully checked and a dimensional report is drawn up to confirm its validity.

*In addition, we have a **UNI EN ISO 14001: 2004** certification to improve environmental impact and performance within our company*

*We will soon be introducing our own quality system by certifying ourselves for the **UNI EN 9100***

Particular attention is paid to product traceability through a scrupulous internal and external control of all processes with our suppliers.



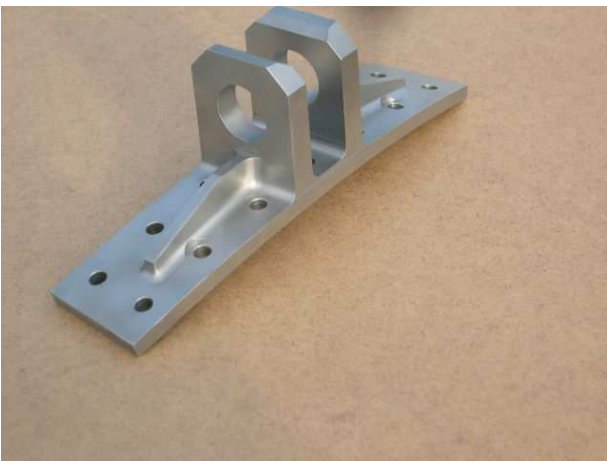
The company has sound experience in aeronautical material processing such as:

- 1. Titanium*
- 2. Inconel 718*
- 3. 17-4-PH and 15-5-PH*
- 4. Custom 450 US Alloy*
- 5. Molybdenum*
- 6. Tungsten*
- 7. Aluminium Alloys, Avional, Non-Corrosive, Ergal*
- 8. Quenched and tempered steels*
- 9. Austenitic and martensitic stainless steel*
- 10. Incoloy a286*
- 11. Graphite*

Examples of machining and materials used



6Al4V Titanium Manifold
Aerospace Industry
Vega Programme



17-4-PH Bracket
Aerospace Industry
Vega Programme



AL 6061 T6 Brackets
Aerospace Sector
Vega Programme



AL 7075 T7351 jack bracket
Aerospace Sector
Vega Programme



Inconel 718, SAE 321, copper-zirconium turbo pump components
Aerospace Sector
FLPP Programme



Hybrid engine injection plate in inconel 718,
copper-zirconium
Inconel-inconel vacuum brazing
Aerospace Sector
Hyprob Programme



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